

EXHIBIT M



OCEAN TOMO

INTELLECTUAL CAPITAL EQUITY

EPIC GAMES, INC. v APPLE INC.

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION**

Civil Action No. 4:20-cv-05640-YGR

REBUTTAL EXPERT REPORT OF JAMES E. MALACKOWSKI

March 15, 2021

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3. EXECUTIVE SUMMARY OF OPINIONS AND ANALYSES

13. My opinions and analyses in this matter are provided for use by the Court in identifying and evaluating the connection between Apple's intellectual property ("IP") rights and the acts and conduct by Apple that are alleged to be unlawful in this litigation, as well as the remedies that Epic has indicated it intends to seek if it prevails on its claims:

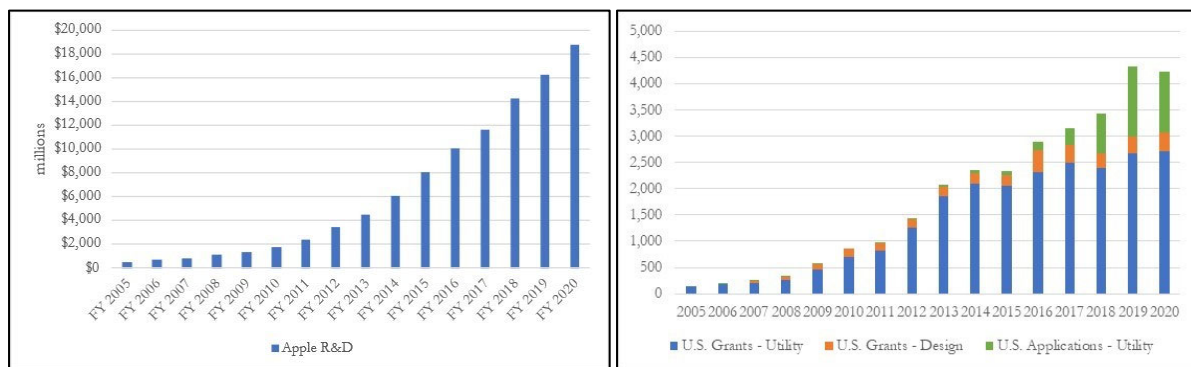
3.1. Executive Summary of Opinions

3.1.1. Substantial Apple R&D Investment and Strong IP Portfolio

14. From Apple's fiscal year ("FY") 2005, when Apple's efforts to invent its iPhone technology began in earnest, through its FY 2020, Apple invested over \$100 billion in research and development, including aspects of its technology ranging from software and hardware to services to accessories. Apple has protected these innovations by obtaining patents, trademarks and copyrights, as well as maintaining trade secrets.

15. There was substantial growth in both Apple's investment in research and development and in the number of its U.S. patent grants and applications from 2005 to 2020.

Figure 1: Apple R&D Expenditures and Patent Grants 2005 – 2020⁷



16. Apple's investment in research and development, which has grown substantially over time, has in part resulted in a continuously growing portfolio of IP assets, including patents, trademarks,

⁷ Schedule 6.0; Schedule 1.1; Schedule 1.2; Schedule 1.3.

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copyrights and trade secrets that protect its technology, tools and software. Apple currently has almost 26,000 U.S. patents and approximately 3,900 additional U.S. patent applications. Apple owns almost 4,900 registered U.S. copyrights. Apple has registered in the U.S. over 1,500 trademarks, and has obtained service marks, trade names and trade dress as protection of its rights in these valuable assets. Apple also maintains trade secrets.

17. Many of these IP assets relate to technologies applicable to iOS and the App Store, development tools and other related technology, including almost 3,200 U.S. patents and applications relating to development tools, application programming interfaces (“APIs”) in frameworks and related service and other technology used by app developers, such as Epic, in developing iOS apps. The App Store itself is referenced in more than 250 U.S. patents and applications. Apple has more than 200 registered copyrights including the term iOS and trademarks of the term App Store®, developer tools such as CloudKit® and Swift® and slogans used to promote the App Store such as “There’s an app for that”®.

18. An IP owner’s exclusive right in its intellectual property originates from the U.S. Constitution and has been codified by Congress and, in some instances, in state law. Through its ownership and control of its intellectual property, Apple holds the exclusive right to determine if and when its protected technology may be used, including the right to choose to license – or not license – its protected technology according to monetary and non-monetary terms of its own choosing.

3.1.2. Developers of Apps for iOS Must Use Apple IP

19. Apple’s IP rights are integral to the development, testing and distribution of apps for the iOS ecosystem. Apple makes available to app developers an extensive library of developer documentation and code, including tutorials, sample code, articles and APIs, that are protected by Apple IP, including patents, copyrights, trademarks and trade secrets. A developer must use Apple’s IP to develop apps for the iOS ecosystem, to distribute apps for use in the iOS ecosystem by consumers, and to monetize apps through the iOS ecosystem, if the developer chooses to charge for its apps and/or in-app purchases. In other words, a developer cannot participate in the iOS app marketplace without using Apple’s IP.

20. Through the Apple Developer Program, Apple grants app developers limited licenses to the Apple IP they practice or use in developing, testing and distributing their iOS apps, in addition to a variety of additional rights and services. Under the limited license rights that Apple provides, app developers may access “a broad array of tools, software, and other intellectual property created and

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continuously refined by Apple, including the SDKs, operating systems, and other software...as well as the App Store Connect suite of web-based tools to distribute pre-release versions of apps via TestFlight and to publish approved apps on the App Store.”⁸ The Apple Developer Program includes access to “beta OS releases, advanced app capabilities, and tools needed to develop, test, and distribute apps and Safari Extensions.”⁹ As explained by current Apple Fellow and former Senior Vice President, Worldwide Marketing Philip Schiller, Apple APIs are provided “for virtually every task a developer might wish to implement with software or hardware.”¹⁰

21. To use Apple’s extensive and valuable IP rights covering “Apple Software,” developers agree (among other things) that iOS apps “developed using the Apple Software may be distributed only if selected by Apple ... for distribution via the App Store”¹¹

3.1.3. Epic Acknowledges Using Apple Technology Protected by Apple IP

22. Epic, in particular, has used Apple’s IP in its development, promotion and distribution of *Fortnite* for the iOS ecosystem. Epic acknowledges that, “Apple has over 250,000 application programming interfaces (“APIs”) that are available to developers and it is virtually impossible to develop an app for, or a toolset for development on, iOS or macOS without them.”¹² According to Epic’s Senior Online and Game Play Programmer, David Nikdel: “In order to create an executable that runs on iOS, you don’t have any choice other than to use Xcode, to my understanding.”¹³

23. Epic has made use of many of Apple’s services and tools to create, maintain and update *Fortnite*, including thousands of Apple’s APIs, multiple versions of Apple SDKs and XCode builds, and the XCode IDE, as well as benefitted from engineering support, services and capabilities provided by Apple to support the development of advanced app features and address issues with

⁸ Declaration of Philip W. Schiller In Support of Defendant Apple Inc.’s Opposition to Plaintiff’s Motion for a Preliminary Injunction, September 15, 2020, p. 6.

⁹ “Using Apple Beta Software,” *Apple*, <https://developer.apple.com/support/beta-software/>; “Membership Details,” *Apple*, <https://developer.apple.com/programs/whats-included/>; “From Code to Customer,” *Apple*, <https://developer.apple.com/programs/>.

¹⁰ Declaration of Philip W. Schiller In Support of Defendant Apple Inc.’s Opposition to Plaintiff’s Motion for a Preliminary Injunction, September 15, 2020, pp. 1, 6.

¹¹ Apple Developer Program License Agreement, Declaration of Philip W. Schiller In Support of Defendant Apple Inc.’s Opposition to Plaintiff’s Motion for a Preliminary Injunction, September 15, 2020, Exhibit B, Section 1.2, 3.2(g).

¹² Epic Games, Inc.’s Responses and Objections to Apple Inc.’s First Set of Interrogatories, December 11, 2020, Response to Interrogatory No. 6, p. 14.

¹³ David Nikdel, Deposition February 8, 2021, p. 179.

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Fortnite. Of Apple's over 250,000 APIs, Epic acknowledges using for the iOS version of *Fortnite* at least the following:

- UIKit and Metal, which function to maximize 3D graphics, the multi-touch and other inputs and computing potential of iOS;
- CoreAudio, CoreMedia and CoreVideo, which function to interact with the iOS device's media hardware and the media pipelines for processing digital video;
- CoreMotion, which allows the use of movement and environment-related event data; and
- CloudKit for authentication and structured asset storage services, if Epic seeks to allow users to access existing data in the app on multiple devices.¹⁴

24. The Apple technology that Epic acknowledges using in connection with the development, distribution and use of the iOS version of *Fortnite* is protected by Apple patents, copyrights, trademarks and trade secrets. Specifically, Apple owns 22 U.S. patents referring to its UIKit technology, 107 U.S. patents referring to CoreAudio, CoreGraphics and/or CoreVideo, 4 U.S. patents referring to CoreMotion, as well as a U.S. patent on CloudKit. Apple owns 67 U.S. patents on SDKs.¹⁵ Overall, Apple has more than 2,500 U.S. patents covering aspects of technology used by app developers such as Epic.¹⁶ Apple places copyright protection on its software, documentation and source code covering iOS content, APIs, beta iOS releases, SDKs and other materials used by an app developer like Epic. APIs used by Epic are protected by at least Apple copyrights. In addition, the names of frameworks Epic acknowledges using are trademarked by Apple, including CloudKit®, iAd® and Metal®, and Epic has benefited from the use of Apple's trademarks and brand when, for example, Epic showcased its launch of *Fortnite* during the 2015 Worldwide Developer Conference ("WWDC 15"), presented about *Fortnite* on iOS during the 2018 Worldwide Developer Conference ("WWDC 18"), and collaborated in other marketing efforts with Apple.¹⁷

¹⁴ Epic Games, Inc.'s Responses and Objections to Apple Inc.'s First Set of Interrogatories, December 11, 2020, Response to Interrogatory No. 6, p. 14; Glossary – Appendix D.

¹⁵ Schedule 3.1.

¹⁶ Schedule 3.0.

¹⁷ Declaration of Philip W. Schiller In Support of Defendant Apple Inc.'s Opposition to Plaintiff's Motion for a Preliminary Injunction, September 15, 2020, p. 28; Epic Games, Inc.'s Responses and Objections to Apple Inc.'s Third Set of Interrogatories, February 15, 2021, Response to Interrogatory No. 22, p. 11-12.

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Apple has promoted *Fortnite* through “different marketing channels ... includ[ing] App Store banners and app featuring as well as posts and paid advertisements on social media.”¹⁸

3.1.4. Epic’s Experts Ignore Apple’s IP and its Necessary Use for iOS Apps

25. Epic’s experts, including Dr. Evans, Dr. Athey, Dr. Mickens and Dr. Lee, fail to address the fact, acknowledged by Epic, that Epic has used Apple’s IP and that “it is virtually impossible to develop an app for, or a toolset for development on, iOS” without use of Apple’s IP-protected APIs and SDKs.¹⁹ Epic’s experts fail to recognize the existence of Apple’s IP rights as well as the breadth and strength of Apple’s IP portfolio. This failure casts doubt on the conclusions and opinions in the reports of Epic’s experts.

26. In addition, at least in part because of their failure to acknowledge Apple’s IP, Epic’s experts offer proposals based on broad use of Apple’s IP, without regard for Apple’s IP rights, the appropriate authorization for use of its IP rights by Apple through licensing or the appropriate compensation to Apple for the use of its IP. While ignoring the IP portfolio resulting from Apple’s investments in research and development and in innovation, the conclusions of Epic’s experts require as one underlying assumption that Apple will continue to innovate, and that parties such as Epic should and will benefit from Apple’s continuing investment in innovation.

3.1.5. Implications of Apple’s IP Rights For This Litigation

27. Epic challenges certain of the conditions that Apple places on the access, use and practice of Apple’s IP, including the requirement that iOS apps developed using Apple Software be distributed only through the App Store. However, as explained in my report, the exclusive rights conferred on an IP owner by patent, copyright, trademark and other IP laws permit that IP owner to impose reasonable restrictions when choosing to license the use of its property by others. In addition, the IP owner is entitled to earn a return on the use of its property if it chooses to license it.

28. Drs. Evans, Athey, Mickens and Lee, Epic’s experts, disregard that their preferred outcomes would require continued access to Apple’s IP by app developers and the third-parties providing app stores on or for iOS devices. All assume that Apple will continue to invest in developing IP and will continue to share that IP with app developers and third-party app stores, including, for example, the

¹⁸ Epic Games, Inc.’s Responses and Objections to Apple Inc.’s Third Set of Interrogatories, February 15, 2021, Response to Interrogatory No. 22, p. 11-12.

¹⁹ Epic Games, Inc.’s Responses and Objections to Apple Inc.’s First Set of Interrogatories, December 11, 2020, Response to Interrogatory No. 6, p. 14.

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Apple IP needed to download, install and execute an app on an iOS device and may include assumptions regarding access to Apple's IP on iOS, which it does not license to third-parties. None consider the appropriate compensation for the use of Apple's IP in their proposed alternative worlds, or whether and on what terms Apple would or could license its IP to third parties.

29. Epic's proposed injunctive relief makes no reference to the Apple IP rights that protect the iOS functionality and features to which Epic demands "equivalent access," nor does it address how Apple would be compensated for the infringement of its IP rights that Epic has asked the Court to order in its demand for "equivalent access." Epic's requested injunctions would, at their core, prevent Apple from enforcing the IP rights in which it has invested and obtained exclusive ownership rights, as well as the specific terms under which Apple has chosen to license its protected IP technology through various limited license agreements and guidelines governing usage of its IP.

30. Epic's proposed injunctive relief is fundamentally inconsistent with the exclusive rights conferred by the patent, copyright, trademark and other IP laws.

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